

pected and in themselves revealing. The present volume, which is part of a series edited by A. M. Alfer, John L. Margrave, and A. S. Nowick, provides an up-to-the-year summary of some of the issues of concern to those involved in the study of diffusion. It has both the advantages and the disadvantages of a multiauthored volume. What one gains in breadth by having a number of viewpoints represented is partly offset by a lack of unity. In the present case the advantages far outweigh the disadvantages, since the book is primarily intended to give the reader a broad perspective of major issues of current interest.

The first two chapters, by Wilbur M. Franklin and Charles H. Bennett, respectively, are devoted to theoretical analysis of factors such as mass dependence and quantum and anharmonicity effects that enter into the detailed structure of the equations that govern diffusion, and give exact calculations for simplified models. The remaining chapters focus on special types of diffusion that currently are of major interest. There is a chapter on isotope effects in diffusion by N. L. Peterson, one on fast diffusion in metals by W. K. Warburton and D. Turnbull, one on the diffusion of hydrogen in metals by J. Völkl and G. Alefeld, one on electromigration in metals by H. B. Huntington, and a discussion of atomic currents generated by vacancy winds by T. R. Anthony. The volume is by no means restricted to metals but also contains an account of diffusion in the alkali halides by W. J. Fredericks and a discussion of very rapid ionic transport in solids by Robert A. Huggins.

The book carries with it the atmosphere of lively interest one encounters at moving frontiers. It is an important addition to the literature of solid state science.

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## Ion-Molecule Interactions

**Interaction between Ions and Molecules.** Proceedings of a NATO Advanced Study Institute, Biarritz, France, June 1974. PIERRE AUSLOOS, Ed. Plenum, New York, 1975. x, 690 pp., illus. \$54. NATO Advanced Study Institutes Series B, Physics, vol. 6.

This book is a report of recent progress achieved in the many, specialized kinds of research concerned with ion-molecule interactions. Taken as a whole, it is a success story par excellence. From scant beginnings only 20 years ago, when experiments

on ion-molecule reactions were carried out mainly in electron-impact ion sources of conventional mass spectrometers, there have been such great advances that this collection of 28 papers and four panel discussions can barely scratch the surface. Crossed-beam and beam-attenuation methods for the experimental study of elastic, inelastic, and reactive collision dynamics make up about one-sixth of the volume, yet are somewhat underrepresented, although there are fine papers on elastic scattering (Ding), direct ion-molecule reactions (Mahan), and angular distribution studies (Birkinshaw *et al.*). A mixed group of theoretical papers covers questions of potential energy surfaces, statistical phase-space theory, classical trajectories, and simple polarization and ion-dipole theories but is somewhat less successful than the experimental papers in providing a clear summary of present accomplishments and future expectations.

The most substantive advances, at least in terms of number of reaction systems, extension to negative ions, energy and temperature ranges covered, and application to complicated reactant species, have come in the "bulk" methods, those of the flowing afterglow (Ferguson, Fehsenfeld, Bohme), of ion cyclotron resonance (Beauchamp), and of drift tubes and swarms (Hasted). This progress has made possible the strikingly successful application of newly measured rate parameters to atmospheric (Ferguson) and astrophysical (Dalgarno) problems. Ten to 15 years ago, research on ion-molecule interactions was a frontier in chemical physics. That frontier has now shifted to more esoteric matters, such as the effects of internal excitation on the reactant or the product channels of these interactions. The photoionization technique is shown to be particularly useful in providing accurate information on the effect of vibrational or electronic excitation in the ionic reactant on the cross section of reactive processes (Chupka), and reactions of electronically excited positive ions are studied by beam attenuation methods (Koski). The examination of electronically excited reaction products in beam or flowing afterglow experiments, now still in its infancy, may be expected to grow rapidly (Marx).

The book is understandably uneven in style and coverage, but it is so full of interesting and varied new work, presented with authority and enthusiasm, that one gladly forgives minor failings. The editor thought the summer school a memorable one, and its published record bears him out.

FREDERICK KAUFMAN

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## Books Received

**Adenine Arabinoside.** An Antiviral Agent. Papers from a symposium, San Francisco, Sept. 1974. Deborah Pavan-Langston, Robert A. Buchanan, and Charles A. Alford, Jr., Eds. Raven Press, New York, 1975. xx, 426 pp., illus. \$21.50.

**Adsorption at Interfaces.** Papers from a symposium, Los Angeles, Apr. 1974. K. L. Mittal, Ed. American Chemical Society, Washington, D.C., 1975. xiv, 290 pp., illus. \$12.95. ACS Symposium Series, 8.

**Advances in Applied Mechanics.** Vol. 15. Chia-Shun Yih, Ed. Academic Press, New York, 1975. x, 266 pp., illus. \$16.50.

**Advances in Human Genetics.** Vol. 5. Harry Harris and Kurt Hirschhorn, Eds. Plenum, New York, 1975. xiv, 386 pp., illus. \$32.50.

**Advancing Frontiers in Cytogenetics.** In Evolution and Improvement of Plants. Professor P. N. Mehra Commemorative Volume. Proceedings of a seminar, Kashmir, India, Oct. 1972. P. Kachroo, Ed. Hindustan Publishing Corp., Delhi, 1974 (U.S. distributor, International Scholarly Book Services, Portland, Ore.). xvi, 378 pp., illus. \$14.

**Aging.** Scientific Perspectives and Social Issues. Diana S. Woodruff and James E. Birren, Eds. Van Nostrand, New York, 1975. viii, 422 pp., illus. \$9.95.

**Algebras in Analysis.** Proceedings of a NATO Advanced Study Institute, Birmingham, England, Sept. 1973. J. H. Williamson, Ed. Academic Press, New York, 1975. xiv, 312 pp. \$28.50.

**The Alkaloids.** Chemistry and Physiology. Vol. 15. R. H. F. Manske, Ed. Academic Press, New York, 1975. xvi, 316 pp., illus. \$39.50.

**Amazon Jungle.** Green Hell to Red Desert? An Ecological Discussion of the Environmental Impact of the Highway Construction Program in the Amazon Basin. R. J. A. Goodland and H. S. Irwin. Elsevier, New York, 1975. x, 156 pp., illus. \$13.75. Developments in Landscape Management and Urban Planning, 1. Reprinted from *Landscape Planning*, vol. 1, No. 2/3.

**Anesthesiology and the University.** Nicholas M. Greene. Lippincott, Philadelphia, 1975. x, 164 pp. \$10.

**An Atlas of Histology.** Johannes A. G. Rhodin. Oxford University Press, New York, 1975. xii, 452 pp. \$15. Reprint of the atlas section of *Histology: An Atlas and Text* (1974).

**Annual Review of Materials Science.** Vol. 5. Robert A. Huggins, Richard H. Bube, and Richard W. Roberts, Eds. Annual Reviews, Palo Alto, Calif., 1975. xii, 418 pp., illus. \$15.

**Antoine-Laurent Lavoisier.** Chemist and Revolutionary. Henry Guerlac. Scribner, New York, 1975. 174 pp., illus. Cloth, \$7.95; paper, \$2.95. DSB Editions. Based on article in *Dictionary of Scientific Biography* (1973).

**Applied Analytical Mathematics for Physical Scientists.** James T. Cushing. Wiley, New York, 1975. xx, 652 pp. \$19.95.

**Archaeological Sediments.** A Survey of Analytical Methods. Myra L. Shackley. Halsted (Wiley), New York, 1975. xii, 160 pp., illus. \$21.50.

**Assessment of Research on Natural Hazards.** Gilbert F. White and J. Eugene Haas. MIT Press, Cambridge, Mass., 1975. xxii, 488 pp., illus. Paper, \$17.50.

**Astronomy and Astrophysics Abstracts.** Vol. 12, Literature 1974, Part 2. S. Böhme and seven others, Eds. Published for Astronomisches Rechen-Institut by Springer-Verlag, New York, 1975. x, 702 pp. \$37.

(Continued on page 919)

## RESEARCH NEWS

(Continued from page 870)

such aroma chemicals, however.

Test marketing of consumer products containing the counteractants—which Monsanto now calls amals—has already begun, although the company will not reveal the identities of manufacturers using them or of products incorporating them. They are not, however, present in certain highly advertised deodorizers that make rather extravagant claims. The products are being promoted cautiously because of the many previous times that manufacturers have made similar claims without being able to deliver. In the words of a Monsanto official, the industry "has cried 'Wolf!' once too often." The counteractants have been or will soon be used in home air fresheners and such products as depilatories, shampoos, and cosmetics, all of which often contain essential malodorous ingredients.

Other potential uses might be in deodorant soaps, home "permanents," underarm deodorants, douches, and pet litter boxes. Additionally, other work at Monsanto suggests that the counteractants could be incorporated into many industrial products in an encapsulated, slow-release form. Many kinds of box board, plastic tiles, paper, and other products, for example, produce odors that are not harmful, but that are offensive to potential purchasers of the products. Incorporation of the counteractants could overcome this problem.

Academic scientists have been reserved and skeptical about Schleppnik's claims, in large part because he has not been able to supply them with samples of the counteractants until Monsanto is protected by patents. But those who have smelled for themselves believe the phenomenon is real, regardless of whether Schleppnik's explanation of it is or is not correct. Some of the scientists, furthermore, suggest that the counteractants could be valuable for studying olfaction.

At present, the perception of odors can be blocked only with rather crude reagents that irreversibly alter receptors or the nerves connecting them to the brain. Because the effects of the counteractants are reversible, they should make it possible to conduct much more sophisticated experiments with the receptors. The counteractants might also be useful in the study of insect chemoreceptor systems and of proton transfer enzyme systems. But their value for such applications cannot be fully assessed until they are made available to more investigators.

—THOMAS H. MAUGH II

## BOOKS RECEIVED

(Continued from page 878)

**Atlas of Mexico.** Stanley A. Arbingast and eight others. Bureau of Business Research, University of Texas, Austin, ed. 2, 1975. x, 166 pp. Spiral bound, \$15.

**Atomic Physics 4.** Proceedings of a conference, Heidelberg, Germany, July 1974. G. zu Putnitz, E. W. Weber, and A. Winnacker, Eds. Plenum, New York, 1975. xvi, 780 pp., illus. \$59.

**Benefit-Cost and Policy Analysis 1974.** An Aldine Annual on Forecasting, Decision-Making, and Evaluation. Richard Zeckhauser and five others, Eds. Aldine, Chicago, 1975. xxvi, 514 pp. \$18.50; to institutions, \$27.50.

**Biochemical Pharmacology of Ethanol.** Proceedings of a symposium, Chicago, Aug. 1973. Edward Majchrowicz, Ed. Plenum, New York, 1975. xvi, 368 pp., illus. \$29.50. Advances in Experimental Medicine and Biology, vol. 56.

**Biomedical Applications of Polymers.** Proceedings of a symposium, Chicago, Aug. 1973. Harry P. Gregor, Ed. Plenum, New York, 1975. xii, 228 pp., illus. \$22.50.

**Black Zion.** Africa, Imagined and Real, as Seen by Today's Blacks. David Jenkins. Harcourt Brace Jovanovich, New York, 1975. 286 pp. \$10.95.

**British Cenozoic Fossils.** (Tertiary and Quaternary.) British Museum (Natural History), London, ed. 5, 1975. vi, 132 pp., illus. Paper, 50p. Publication No. 540.

**Cancer.** A Comprehensive Treatise. Vol. 1, Etiology: Chemical and Physical Carcinogenesis. Frederick F. Becker, Ed. Plenum, New York, 1975. xx, 524 pp., illus. \$37.50.

**The Catharanthus Alkaloids.** Botany, Chemistry, Pharmacology, and Clinical Use. William I. Taylor and Norman R. Farnsworth, Eds. Dekker, New York, 1975. x, 324 pp., illus. \$29.50.

**Cell Cycle and Cell Differentiation.** J. Reinert and H. Holtzer, Eds. Springer-Verlag, New York, 1975. xii, 334 pp., illus. \$29.70.

**Chromosome Atlas.** Fish, Amphibians, Reptiles and Birds. Vol. 3. Maria Luiza Becak, Willy Becak, T. R. Chen, and Robert N. Shoffner, Eds. Springer-Verlag, New York, 1975. 33 folios. \$19.80.

**Compaction of Coarse-Grained Sediments, I.** George V. Chilngarian and Karl H. Wolf, Eds. Elsevier, New York, 1975. viii, 552 pp., illus. \$54.25. Developments in Sedimentology 18A.

**Comprehending Technical Japanese.** Edward E. Daub, R. Byron Bird, and Nobuo Inoue. University of Wisconsin Press, Madison, and University of Tokyo Press, Tokyo, 1975. iv, 438 pp. \$15.

**Computation and Interpretation of Biological Statistics of Fish Populations.** W. E. Ricker. Department of the Environment Fisheries and Marine Service, Ottawa, Canada, 1975 (available from Information Canada, Ottawa). xviii, 382 pp., illus. \$9.60. Bulletin 191.

**Concanavalin A.** Proceedings of a symposium, Norman, Okla., Apr. 1974. Tushar K. Chowdhury and A. Kurt Weiss, Eds. Plenum, New York, 1975. xiv, 360 pp., illus. \$24.95.

**Control Mechanisms of Drinking.** Papers from a symposium, Lugano, Switzerland, Oct. 1973. G. Peters, J. T. Fitzsimons, and L. Peters-Haefeli, Eds. Springer-Verlag, New York, 1975. xiv, 210 pp., illus. \$27.60.

**Deformation of Ceramic Materials.** Proceedings of a symposium, University Park, Pa., July 1974. R. C. Bradt and R. E. Tressler, Eds. Plenum, New York, 1975. x, 578 pp., illus. \$45.

**Developmental Therapy.** A Textbook for



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Teachers as Therapists for Emotionally Disturbed Young Children. Mary M. Wood, Ed. University Park Press, Baltimore, 1975. xii, 294 pp., illus. Paper, \$9.75.

**Distribution and Biogeography of Mammals of Iowa.** John B. Bowles. Texas Tech Press, Lubbock, 1975. 184 pp., illus. Paper, \$5. Special Publications of the Museum, Texas Tech University, No. 9.

**Document Retrieval Systems.** Factors Affecting Search Time. K. Leon Montgomery. Dekker, New York, 1975. x, 144 pp. \$12.75. Books in Library and Information Science, vol. 14.

**Doing Fieldwork.** Warnings and Advice. Rosalie H. Wax. University of Chicago Press, Chicago, 1975. x, 396 pp. Paper, \$4.95. Reprint of the 1971 edition.

**Dynamic Information and Library Processing.** Gerard Salton. Prentice-Hall, Englewood Cliffs, N.J., 1975. xvi, 524 pp., illus. \$19.95.

**The Early Development of Mammals.** Papers from a symposium. Norwich, England, Sept. 1974. M. Balls and A. E. Wild, Eds. Cambridge University Press, New York, 1975. viii, 410 pp., illus. \$49.50. British Society for Developmental Biology Symposium 2.

**The Earth's Density.** K. E. Bullen. Chapman and Hall, London, and Halsted (Wiley), New York, 1975. xiv, 420 pp., illus. \$37.50.

**Ecological Modeling.** In a Resource Management Framework. Proceedings of a symposium, Washington, D.C., Sept. 1974. Clifford S. Russell, Ed. Resources for the Future, Washington, D.C., 1975 (distributor, Johns Hopkins University Press, Baltimore). xii, 394 pp., illus. Paper, \$6. RFF Working Paper QE-1.

**Electric Current Flow in Excitable Cells.** J. J. B. Jack, D. Noble, and R. W. Tsien. Clarendon (Oxford University Press), New York, 1975. xvi, 502 pp., illus. \$45.

**Electroanesthesia.** Biomedical and Biophysical Studies. Anthony Sances, Jr., and Sanford J. Larson. Academic Press, New York, 1975. xvi, 368 pp., illus. \$36. Clinical Engineering Series.

**Electron Microscopy and Analysis.** P. J. Goodhew. Wykeham, London, and Springer-Verlag, New York, 1975. viii, 192 pp., illus. Paper, \$7.80. Wykeham Science Series.

**Electronic Methods.** Part A. E. Bleuler and R. O. Haxby, Eds. Academic Press, New York, ed. 2, 1975. xxii, 438 pp., illus. \$34.

**The Energy Conservation Papers.** Robert H. Williams, Ed. Ballinger (Lippincott), Cambridge, Mass., 1975. xx, 380 pp., illus. Cloth, \$17.50; paper, \$8.95. A Report to the Energy Policy Project of the Ford Foundation.

**Energy Research and Development.** J. Herbert Holloman and Michel Grenon. Ballinger (Lippincott), Cambridge, Mass., 1975. xxii, 266 pp. Cloth, \$13.50; paper, \$4.95. A Report to the Energy Policy Project of the Ford Foundation.

**Enzyme Induction.** Dennis V. Parke, Ed. Plenum, New York, 1975. xii, 328 pp., illus. \$27.50. Basic Life Sciences, vol. 6.

**Essentials of Gynecologic and Obstetric Endocrinology.** Habeeb Bacchus. University Park Press, Baltimore, 1975. viii, 232 pp., illus. Paper, \$12.50.

**Estrogens in the Post-Menopause.** Proceedings of a conference, Geneva, Oct. 1974. Pieter A. van Keep and Christian Lauritzen, Eds. Karger, Basel, 1975. x, 234 pp., illus. \$31.75. Frontiers of Hormone Research, vol. 3.

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**Fast Processes in Radiation Chemistry and Biology.** Proceedings of a conference, Sussex, Eng-

land, Sept. 1973. G. E. Adams, E. M. Fielden, and B. D. Michael, Eds. The Institute of Physics, London, and Wiley, New York, 1975. x, 382 pp., illus. \$33.

**Female Sexuality and the Oedipus Complex.** Humberto Nagera. Aronson, New York, 1975. xiv, 144 pp. \$10. Classical Psychoanalysis and Its Applications.

**Fracture of Brittle Solids.** B. R. Lawn and T. R. Wilshaw. Cambridge University Press, New York, 1975. x, 204 pp., illus. Cloth, \$22; paper, \$10.95. Cambridge Solid State Science Series.

**Freeze Drying and Advanced Food Technology.** Proceedings of a meeting, Bûrgenstock, Switzerland, June 1973. S. A. Goldblith, L. Rey, and W. W. Rothmayr, Eds. Academic Press, New York, 1975. xxxii, 730 pp., illus. \$45. Food Science and Technology.

**Fundamentals of Neurophysiology.** Robert F. Schmidt, Ed. Translated from the German edition (Berlin, 1974) by Derek Jordan and Inge Jordan. Springer-Verlag, New York, 1975. x, 294 pp., illus. Paper, \$11.80. Springer Study Edition.

**Gas-Phase Electron Diffraction.** Springer-Verlag, New York, 1975. iv, 120 pp., illus. \$18.10. Topics in Current Chemistry, 53.

**Gastrointestinal Hormones.** Papers from a symposium, Galveston, Tex., Oct. 1974. James C. Thompson, Ed. University of Texas Press, Austin, 1975. xxiv, 666 pp., illus. \$15.

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**Gypsies in the City.** Culture Patterns and Survival. Rena C. Gropper. Darwin Press, Princeton, N.J., 1975. xiv, 236 pp., illus. \$9.95.

**Haemoglobin, Isoenzymes and Tissue Differentiation.** C. J. Masters and R. S. Holmes. North-Holland, Amsterdam, and Elsevier, New York, 1975. xiv, 308 pp., illus. \$32.95. Frontiers of Biology, vol. 42.

**Handbook on the Laboratory Mouse.** Charles G. Crispens, Jr. Thomas, Springfield, Ill., 1975. x, 268 pp. Spiral bound, \$9.75.

**Health Project Management.** A Manual of Procedures for Formulating and Implementing Health Projects. J. Bainbridge and S. Sapirie. World Health Organization, Geneva, 1974 (U.S. distributor, Q Corp., Albany, N.Y.). vi, 280 pp., illus. Paper, \$16.20. WHO Offset Publication No. 12.

**Hormonal Correlates of Behavior.** Vol. 1, A Lifespan View. Basil E. Eleftheriou and Richard L. Sprott, Eds. Plenum, New York, 1975. xviii, 440 pp. \$29.50.

**Immunity and Cancer in Man.** An Introduction. Arnold E. Reif, Ed. Dekker, New York, 1975. xxii, 162 pp. \$12.50. Immunology Series, vol. 3.

**The Impact of Malaria on Economic Development.** A Case Study. Gladys N. Conly. Pan American Health Organization, Washington, D.C., 1975. viii, 118 pp., illus. Paper, \$2.50. Scientific Publication No. 297.

**Infectious Multiple Drug Resistance.** S. Falkow. Pion Limited, London, 1975 (distributor, Academic Press, New York). xiv, 300 pp. + plates. \$19.95. Pion Advanced Biochemistry Series, 4.

**Internment in Concentration Camps and Its Consequences.** Paul Matussek with Rolf Grigat

and seven others. Translated from the German edition (Berlin, 1971) by Derek and Inge Jordan. Springer-Verlag, New York, 1975. xii, 272 pp. \$12.60.

**Intersexuality in the Animal Kingdom.** Papers from a symposium, Mainz, Germany, July 1974. R. Reinboth, Ed. Springer-Verlag, New York, 1975. xvi, 452 pp., illus. \$41.80.

**Introduction to Experimental Nuclear Physics.** R. M. Singru. Halsted (Wiley), New York, 1975. xii, 162 pp., illus. \$6.95.

**Land Use in Advancing Agriculture.** A. P. A. Vink. Springer-Verlag, New York, 1975. x, 396 pp., illus. \$25.80. Advanced Series in Agricultural Sciences 1.

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Deyl, Karel Macek, and Jaroslav Janák, Eds. Elsevier, New York, 1975. xxii, 1176 pp., illus. \$120.95. Journal of Chromatography Library, vol. 3.

**Looking at Animals.** A Zoologist in Africa. Hugh B. Cott. Scribner, New York, 1975. 222 pp., illus. + plates. \$14.95.

**Luria's Neuropsychological Investigation.** Anne-Lise Christensen. Spectrum, New York, 1975 (distributor, Halsted [Wiley], New York). 204 pp., illus. Paper, \$24. Manual, 56 pp., illus. Paper, \$7.95. Test cards. \$40.

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**Measurement and Analysis of Political Systems.** A Science of Social Behavior. Stephen Coleman. Wiley-Interscience, New York, 1975. xii, 220 pp., illus. \$16.95. Comparative Studies in Behavioral Science.

**Methods Used in the USSR for Establishing Biologically Safe Levels of Toxic Substances.** Papers from a meeting, Moscow, Dec. 1972. World Health Organization, Geneva, 1975 (U.S. distributor, Q Corp., Albany, N.Y.) 172 pp. Paper, \$13.

**Microprogramming.** Guy G. Boulaye. Translated from the French edition (Paris, 1971). P. A. Beaven, Transl. Ed. Halsted (Wiley), New York, 1975. xii, 158 pp., illus. \$15.50.

**Modern Aspects of Electrochemistry.** No. 10. J. O'M. Bockris and B. E. Conway, Eds. Plenum, New York, 1975. xii, 452 pp., illus. \$32.50.

**Museum Cataloging in the Computer Age.** Robert G. Chenhall. American Association for State and Local History, Nashville, Tenn., 1975. viii, 262 pp., illus. \$17.50.

**New Energy Technologies for Buildings.** Institutional Problems and Solutions. Richard Schoen, Alan Hirshberg, and Jerome Weingart. Jane Stein, Ed. Ballinger (Lippincott), Cambridge, Mass., 1975. xviii, 220 pp., illus. Cloth, \$12; paper, \$3.95. A Report to the Energy Policy Project of the Ford Foundation.

**New Frontiers in Astronomy.** Readings from *Scientific American*. Owen Gingerich, Ed. Freeman, San Francisco, 1975. viii, 370 pp., illus. Cloth, \$13; paper, \$7.50.

**Nuclear Structure.** William F. Hornyak. Academic Press, New York, 1975. xiv, 606 pp., illus. \$49.50.

**The Odonata of Canada and Alaska.** Vol. 3, The Anisoptera—Three Families. Edmund M. Walker and Philip S. Corbet. University of Toronto Press, Toronto, 1975. xvi, 308 pp., illus. \$25.

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**Polychloroaromatic Compounds.** H. Suschitzky, Ed. Plenum, New York, 1974. x, 544 pp., illus. \$35.

**Positive Staining for Electron Microscopy.** M. A. Hayat. Van Nostrand Reinhold, New York, 1975. xxii, 362 pp., illus. \$27.50.

**Principles and Practice of X-Ray Spectrometric Analysis.** Eugene P. Bertin. Plenum, New York, ed. 2, 1975. xxxii, 1080 pp., illus. \$75.



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**Principles of Microbe and Cell Cultivation.** S. John Pirt. Halsted (Wiley), New York, 1975. x, 274 pp., illus. \$34.

**Problems in Stellar Atmospheres and Envelopes.** B. Baschek, W. H. Kegel, and G. Traving. Eds. Springer-Verlag, New York, 1975. xx, 378 pp., illus. \$20.70.

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28 NOVEMBER 1975

# Personnel Placement

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## POSITIONS WANTED

**Biochemist,** Ph.D., 1966. Four years of postdoctoral research in lipid/carbohydrate chemistry and animal cell virology; 5 years of teaching, undergraduate/graduate; current research grants, nuclear and plasma membranes/cell cycle/herpes simplex virus; publications; desires research/teaching position; available immediately; prefers Northeast, Northwest, Southwest, Mountain. Box 467, SCIENCE X

**Biologist:** Ph.D., have grants, will travel. Seeks teaching and research position. Research interests: parental care (presocial) in insects. Eight years of teaching experience and publications. Box 480, SCIENCE. X

**Ecologist/Ichthyologist,** Ph.D. Postdoctoral training; experienced in graduate and undergraduate teaching. Research in environmental monitoring, estuarine, continental shelf and continental slope ecosystems, functional anatomy, systematics. Desires teaching, research, or administrative position. Box 471, SCIENCE. X

**Electron Microscopist,** Ph.D. Four years of postdoctoral experience in neuroanatomy, with publications. Qualified, reliable, and versatile. Seeks new and interesting permanent position (academic, research institution, or industry) in Europe or America. Languages: English and German. Box 481, SCIENCE. X

**Microbiologist:** Ph.D., June 1976. Teaching and research experience in biology, ecology, and microbiology. Research experience in marine microbiology and microbial ecology. Three years of supervisory experience (U.S. Army Reserve). Have excellent academic record, funded by competitive university fellowship. Looking for postdoctoral, teaching, or industrial position. A. Rosenberg, Department of Microbiology, Spaulding Life Science Building, University of New Hampshire, Durham, New Hampshire 03824. X

Ph.D. **Somatic Cell Genetics.** Training in population genetics and statistics. Expert with computers. Publications. Desires teaching/research position. Box 478, SCIENCE. 12/5, 12

## POSITIONS OPEN

### ANIMAL ECOLOGIST

The Department of Zoology, University of California, Davis, is seeking applicants for a position on its faculty. The individual will be expected to teach a one-quarter course in general animal ecology and an advanced course or graduate seminar in his or her own field of specialization. He or she will also be asked to participate in the offering of the department's introductory courses. It is expected that the individual will initiate and carry on a productive research program. Salary and academic rank will be determined by the individual's qualifications and experience.

Persons interested should send a curriculum vitae, a description of their research program and future plans, a summary of their teaching capabilities, and three letters of recommendation. *The University of California is an Equal Opportunity/Affirmative Action Employer.* Send applications to Dr. George W. Salt, Chairman of the Search Committee, Department of Zoology, University of California, Davis, Calif. 95616. Screening of applications began 15 November. Closing date for receipt of applications is 15 February 1976.

### ASSISTANT PROFESSORSHIPS

Department of Biology  
University of California, Riverside

The Biology Department at the University of California, Riverside, is seeking appropriate additions to its faculty starting in the 1976 academic year. Candidates must show evidence of ability to initiate and sustain a productive, high-quality research program and show enthusiasm and skill for teaching biology at both undergraduate and graduate levels.

**Developmental Biology.** Ph.D. degree or equivalent with teaching and research emphasis in one (or more) of the following: animal morphogenesis, cell organization and development, membrane structure and function, developmental genetics. Primary teaching responsibilities in embryology/developmental biology with some participation in upper division introductory and graduate courses expected.

**Genetics.** Ph.D. degree or equivalent with teaching and research experience in one (or more) of the following: somatic cell genetics, developmental genetics, immunogenetics, experimental cytogenetics, genetics of gametes, polygenic inheritance, or behavioral genetics. Primary teaching duties in general genetics course with participation in other departmental offerings in genetics.

**Vertebrate Physiology.** Ph.D. degree or equivalent in vertebrate physiology, endocrinology, or other closely related discipline. Teaching duties to include upper division physiology and anatomy courses, with possible participation in lower division and graduate-level biology courses. If interests and specializations allow, participation in the Biomedical Sciences Program may be possible.

**Population Ecology.** Ph.D. degree or equivalent. Research interest in animal population ecology. Teaching responsibilities to include introductory course in population biology, upper division population ecology, and a graduate-level seminar.

Applicants should provide a curriculum vitae, list of publications, and a brief description of research and teaching interests. Additionally, at least three letters of support should be sent. *The University of California is an Equal Opportunity and Affirmative Action Employer. Applications are invited from all qualified individuals, especially women and members of minority groups.*

Send applications to:

Chairman  
Department of Biology  
University of California  
Riverside, Calif. 92502

Applications and supporting documents should be received in Riverside not later than 15 January 1976.

The University of California, Irvine, College of Medicine is seeking a CHAIRMAN for the Department of Anatomy. Candidates must be eligible for appointment to the rank of professor. Candidates should have demonstrated excellence in biomedical research and teaching and should preferably have administrative experience. Candidates should be capable of providing academic leadership in the reorganization and development of the department. *Applications from all qualified candidates are welcome; minorities and women are encouraged to apply.* Send curriculum vitae before 15 December 1975, to Richard F. Thompson, Chairman of the Search Committee, Department of Psychobiology, University of California, Irvine, California 92664.